

AMENDMENTS TO THE CLAIMS

Please amend claims 1 and 6, cancel claims 5, 11 and 13, and add claims 14-15, as set forth in the following listing of claims, which will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1. (Currently Amended) A corrosion monitor, comprising a substantially inert reference electrode, a working electrode composed of a material to be monitored, ~~and~~ a voltage follower adapted to apply a voltage between the electrodes, wherein the voltage reflects previous values of a current flowing between electrodes, and an integrating circuit for integrating the current, wherein the output of the integrating circuit is introduced to the voltage follower and applied to the working electrode.
2. (Previously Presented) A corrosion monitor according to claim 1 in which the voltage follower applies a voltage between the electrodes that is proportional to an integration of the current.
3. (Canceled)
4. (Canceled)
5. (Canceled)
6. (Currently Amended) A corrosion monitor, comprising a pair of electrodes and electronic circuitry arranged such that DC current flowing between the electrodes is reduced to essentially zero, while allowing any naturally occurring AC current noise to flow unhindered, wherein the electronic circuitry is configured to monitor ~~monitors~~ the AC current noise.
7. (Previously Presented) A corrosion monitor according to claim 6 in which the electrodes comprise of one substantially inert reference electrode, and one working electrode constructed of a material to be monitored.

8. (Previously Presented) A corrosion monitor according to claim 7 in which a voltage potential is monitored between the inert reference electrode and a third electrode constructed of a substantially inert material.

9. (Canceled)

10. (Previously Presented) A corrosion monitor according to claim 1 in which a voltage potential is monitored between the inert reference electrode and a third electrode composed of a substantially inert material.

11. (Canceled)

12. (Previously Presented) A corrosion monitor according to claim 1, further comprising an ammeter for measuring the current.

13. (Canceled)

14. (NEW) A corrosion monitor, comprising
a substantially inert reference electrode,
a working electrode composed of a material to be monitored,
a voltage follower adapted to apply a voltage between the electrodes, wherein the voltage reflects previous values of a current flowing between electrodes and
an integrating circuit for integrating a current flowing between the inert reference electrode and the working electrode to produce an integrator output, wherein the integrator output is connected to an input of the voltage follower.

15. (NEW) The corrosion monitor of claim 14, which the voltage applied by the voltage follower is proportional to the integrator output and an output of the voltage follower is introduced to the integrating circuit to produce the integrator output.